GIHSN-site’s experience & Results of season 2015-2016

Prague, Czech Republic

National Institute of Public Health Hospital Na Bulovce, Dept. of Infectious Diseases
jan.kyncl@szu.cz
Study management summary

- Name of coordinating institution: National Institute of Public Health (Dept. of infectious diseases epidemiology)
- Number of participating hospitals: 1
- No specific demographic features (high proportion of elderly patients, pediatrics, etc.)
- Specific regions covered: capital Prague and Central Bohemian Region (catchment area of 2.5 million population)
- Differences with the core protocol? (specific admission/exclusion criteria, sampling methods?): only patients older 18 years included
- Study period: from 07/Jan/2016 to 28/Apr/2016
Season 2015-2016 results summary

Number of patients
- included
- examined
- influenza positive

Site experience and results of season 2015-2016 – Prague, Czech Republic
Site experience and results of season 2015-2016 – Prague, Czech Republic

Reasons for exclusion (N = 124)

- 77: no communication
- 21: no consent
- 14: no resident
- 6: institutionalized
- 5: hospitalized 30 days
- 1: doesn’t comply ILI criteria
### Included patients
N=248  
(M 122   F 126)

### Examinated patients
N=124  
(M 66    F 58)

### Influenza positive patients
N=42  
(M 24    F 18)

<table>
<thead>
<tr>
<th>Age</th>
<th>Included patients</th>
<th>Examinated patients</th>
<th>Influenza positive patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.8 – 90.5 years</td>
<td>Median 57.8 years</td>
<td>Age 18.8 -90.5 years</td>
<td>Median 48 years</td>
</tr>
<tr>
<td>BMI</td>
<td>17.0 – 55.8</td>
<td>BMI 17.0 – 55.8</td>
<td>Median 26.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BMI 19.8 – 55.8</td>
<td>Median 27.2</td>
</tr>
</tbody>
</table>
Number of patients by calendar week 2016

- Included
- Examined
- Influenza positive

Site experience and results of season 2015-2016 – Prague, Czech Republic
Chronic diseases occurrence by age group

- Cirrhosis / liver disease
- Neuromuscular disease
- Autoimmune disease
- Chronic obstructive pulmonary disease
- Rheumatologic disease
- Renal impairment
- Immunodeficiency / organ transplant
- Asthma
- Neoplasm
- Diabetes
- Cardiovascular disease

Site experience and results of season 2015-2016 – Prague, Czech Republic
Smoking habits

Site experience and results of season 2015-2016 – Prague, Czech Republic
Female patients

- Number of chronic diseases
- Age
- BMI
- Hospitalization days

Site experience and results of season 2015-2016 – Prague, Czech Republic
Female patients with influenza

- Autoimmune disease
- Neoplasm
- Cirrhosis / liver disease
- Renal impairment
- Immunodef. / organ transplant.
- Diabetes
- Asthma
- Cardio-vascul. disease

Age
BMI
Hospitalization days
Lineární (BMI)
Lineární (Hospitalization days)

Age
BMI
Hospitalization

Influenza type

Site experience and results of season 2015-2016 – Prague, Czech Republic
Male patients

- Number of chronic diseases
- Age
- BMI
- Hospitalization days

Site experience and results of season 2015-2016 – Prague, Czech Republic
Male patients with influenza

- Cirrhosis / liver disease
- Neoplasm
- Renal impairment
- Immunodef. / organ transpl.
- Diabetes
- Asthma
- Cardio-vascul. disease

Age
BMI
Hospitalization days

Days of hospitalization

Influenza type

Site experience and results of season 2015-2016 – Prague, Czech Republic
BMI by sex, with dependence on age of patients

BMI / Age of patients

Number of chronic diseases

X - influenza in male population / Y - influenza in female population

Site experience and results of season 2015-2016 – Prague, Czech Republic
Hospitalization length

- no influenza
- influenza A
- influenza B
- influenza AB

Site experience and results of season 2015-2016 – Prague, Czech Republic
Laboratory results, influenza positive patients (N = 42)

Site experience and results of season 2015-2016 – Prague, Czech Republic
Vaccinated patients (N = 8)

- **Influenza A**
- **Influenza B**
- **no influenza**

<table>
<thead>
<tr>
<th>Age of patients in blue, BMI in red</th>
<th>chronic diseases number</th>
<th>Age</th>
<th>BMI</th>
<th>Hospitalisation days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza A</td>
<td>27</td>
<td>2</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Influenza B</td>
<td>47</td>
<td>66</td>
<td>70</td>
<td>19</td>
</tr>
<tr>
<td>Influenza B</td>
<td>2</td>
<td>2</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td>no influenza</td>
<td>2</td>
<td>2</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>no influenza</td>
<td>3</td>
<td>70</td>
<td>76</td>
<td>9</td>
</tr>
<tr>
<td>no influenza</td>
<td>1</td>
<td>85</td>
<td>85</td>
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<tr>
<td>no influenza</td>
<td>1</td>
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<td>85</td>
<td>1</td>
</tr>
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<td>3</td>
<td>90</td>
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<td>3</td>
</tr>
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</table>
Key aspects from the season

- What were the local team expectations for this year? Specific objectives for the season? Were there specific issues in the study implementation?
  - Enrollment of patients improved
  - Difficulty with obtaining of external data (e.g. pneumonia cases in hospital as well as the whole country for „Disease burden estimation using SARI sentinel surveillance data“)
- Epidemiological characteristics of the influenza season (unusual circulation in the country? Unusual timeline?) Relatively high numbers of severe disease this season

Influenza Virological Overview for Czech Republic, Season 2015/16

Number of positive sentinel and non-sentinel specimens for influenza A and B viruses
Challenges

• Room for improvement?
  – To improve communication with patients in hospital (with aim to get higher number of informed consent, e.g. to lower the number of excluded patients)
  – Better cooperation among institutions to obtain data for „Diseases burden estimation“

• Strengths and weaknesses
  – Laboratory of good quality
  – Relatively low number of patients but no chance to get another hospital site into the project
Patient’s number with diagnosis pneumonia

Year 2014:
- Czech Republic: 18,769
- Region Prague: 2,091
- Central Bohemian region: 2,176
- Hospital Bulovka: 278

Year 2015:
- Czech Republic: 18,979
- Region Prague: 1,729
- Central Bohemian region: 1,927
- Hospital Bulovka: 318
Thank you for your attention